

ABSTRACT OF THE DISCLOSURE

A first area separating unit scans bit map data in the main scanning direction and separates it into an area including black pixels and an area including  
5 no black pixel on a unit basis of logic rows as an integer of 1 or more. A first encoding unit encodes the area including no black pixel obtained by the first area separating unit. A second area separating unit scans the logic row including the black pixels  
10 separated by the first area separating unit in the sub-scanning direction and separates it into an area including black pixels and an area including no black pixel on a column unit basis. A second encoding unit encodes the area including the black pixels which was  
15 separated by the second area separating unit and in which the number of continuous columns is equal to or more than 2. A third area separating unit separates an area which coincides with a predetermined reference pattern in which the number of columns is  
20 equal to 1 from the areas which were not encoded by the second encoding unit. A third encoding unit encodes the area which coincides with the reference pattern and was separated by the third area separating unit.